CLAIMS

What is claimed is:

1. A protective needle clip comprising a first engaging arm, a connecting base extending at a first angle from the first engaging arm, a second engaging arm extending at a second angle from the connecting base, a connecting top extending at a third angle from the second engaging arm, and a third engaging arm extending at a fourth angle from the connecting top; wherein each of the first, second, and third engaging arms comprises an opening, and wherein at least a portion of the third engaging arm is disposed in between the first engaging arm and the second engaging arm.

2. The protective needle clip of claim 1, further comprising an anchor mechanism disposed in between the first engaging arm and the second engaging arm for abutting with the third engaging arm.

3. The protective needle clip of claim 1, further comprising a finger portion extending at a fifth angle from the first engaging arm.

4. The protective needle clip of claim 1, wherein the first, second, third, and fourth angles are approximately the same within plus or minus three degrees from one another when a needle passes through the openings of the first, second, and third engaging arms.

5. The protective needle clip of claim 1, wherein the connecting base comprises a tapered portion defining a dimension smaller than a non-tapered portion of the connecting base.

6. The protective needle clip of claim 2, wherein the anchor portion comprises a bend formed from a cut out on the connecting base.

7. The protective needle clip of claim 1, wherein the connecting top comprises a coiled portion formed by bending a portion of the connecting top.

8. The protective needle clip of claim 1, wherein the second and third engaging arms each comprises a portion that moves axially relative to a needle having a needle axis and the first engaging arm comprises a portion that moves radially relative the needle axis.

9. The protective needle clip of claim 1, wherein the openings each has an inside diameter that are the same.

10. A protective needle clip comprising an engaging arm comprising an opening extending from a connecting base, the engaging arm and the connecting base comprising a ready position, which is a position in which a needle comprising a needle tip passes through the opening of the engaging arm and biasing the connecting base and the at least a portion the engaging arm radially inwardly relative to the needle, and an activated position, which is the position in which the needle tip moves proximal of the opening and the connecting base and the at least a portion of the engaging arm move radially outwardly away from the needle.

11. The protective needle clip of claim 10, further comprising a second engaging arm and a third engaging arm, the second and third engaging arms each comprises an opening and wherein the needle passes through the openings of the second and third engaging arms when the needle clip is in the ready position.

12. The protective needle clip of claim 10, further comprising a second engaging arm and a third engaging arm, the second and third engaging arms each comprises an opening and wherein the needle passes through the openings of the second and third engaging arms when the needle clip is in the retracted position.

13. The protective needle clip of claim 10, further comprising a second engaging arm extending from the connecting base, a connecting top extending from the second engaging arm, and a third engaging arm extending from the connecting top.

14. The protective needle clip of claim 13, wherein the second and the third engaging arms each comprises an opening and wherein the needle extends through all three openings when the protective needle clip is in the ready position.

15. The protective needle clip of claim 14, wherein the needle extends through the opening of the second and third engaging arms when the protective needle clip is in the retracted position.

16. The protective needle clip of claim 15, wherein the protective needle clip is firmly secured to the needle by at least a portion of each of the openings of the second and third engaging arms wedging against an exterior surface of the needle.

17. The protective needle clip of claim 15, wherein the openings of the second and third engaging arms have an oval projection when the needle clip is in the retracted position.

18. A method for shielding a needle tip of a hypodermic needle comprising:

moving the hypodermic needle relative to a protective needle clip such that the protective needle clip moves from a proximal position on the needle to a distal position on the needle, the protective needle clip comprising a first engaging arm extending from a connecting base, a second engaging arm extending from said connecting base, a connecting top extending from the second engaging arm, and a third engaging arm extending from the connecting top; wherein the first, second, and third engaging arms each comprises an opening and wherein the hypodermic needle extends through the three openings;

moving the needle tip of the hypodermic needle proximal of the opening of the first engaging arm; and allowing at least a portion of the first engaging arm to move radially outwardly away from the needle.

19. The method of claim 18, wherein the second and third engaging arms are in an axially compressed configuration when the needle extends through the three openings.

20. The method of claim 19, wherein the second and third engaging arms axially expand when the needle tip of the hypodermic needle moves proximal of the opening of the first engaging arm.

21. The method of claim 18, wherein the needle clip comprises a ready position, and wherein at least two of the three engaging arms are parallel to one another when the needle clip is in the ready position.

22. The method of claim 18, wherein the protective needle clip further comprises an anchor mechanism positioned on the connecting base.

23. The method of claim 22, wherein the anchor mechanism comprises a cut-out and a bend in the cut-out.

24. The method of claim 18, wherein the connecting top comprises a coiled portion.

25. A catheter needle assembly comprising:

catheter hub comprising an interior surface defining an interior cavity, an open proximal end, and a distal end having a catheter tube extending therefrom, the catheter tube comprising a lumen;

a needle hub comprising an open proximal end and a distal end having a needle comprising a needle tip extending therefrom;

a ready position in which the needle extends through the lumen of the catheter tube, the needle tip extends beyond a distal end of the catheter tube; and a portion of the catheter hub's interior surface in mechanical engagement with an exterior surface of the needle hub; and

a spring clip positioned inside the interior cavity of the catheter hub comprising a first engagement arm, a second engagement arm, and a third engagement arm, each arm having an opening and the needle extending through each of the three openings; and a raised section on the spring clip for contacting the second engagement arm and biasing the second engagement arm.

26. The catheter needle assembly of claim 25, wherein a bump in the interior cavity of the catheter hub is in contact with a portion of the spring clip.

27. The catheter needle assembly of claim 25, further comprising a ring on an interior cavity of the catheter hub.

28. The catheter needle assembly of claim 25, wherein the spring clip further comprises a flexible retaining wing adapted to contact a portion of the interior cavity of the catheter hub.

29. The catheter needle assembly of claim 25, wherein the first engagement arm moves radially outwardly relative to the needle when the needle tip moves proximal of the opening on the first engagement arm.

30. The catheter needle assembly of claim 25, wherein the spring clip further comprises a coiled section.